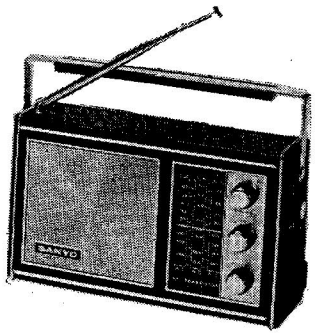
SANYO

10-Transistor 3-Band Portable Radio

MODEL 10G-888

SERVICE MANUAL

SANYO ELECTRIC CO., LTD.
INTERNATIONAL DIVISION: SANYO ELECTRIC TRADING CO., LTD.
OSAKA, JAPAN.



SPECIFICATIONS

FREQUENCY RANGE ..... BC 540 kc - 1605 kc
SW 3.2 mc - 12 mc
FM 87 mc - 108 mc

INTERMEDIATE-FREQUENCY ..... FM 10.7 mc
AM 455 kc

TRANSISTORS

(1) 2SA440 FM RF amplifier
(2) 2SA440 FM convertor
(3) 2SA222 FM 1st I.F amplifier/AM convertor
(4) 2SA321 FM 2nd I.F amplifier/AM 1st I.F amplifier
(5) 2SA321 FM 3rd I.F amplifier/AM 2nd I.F amplifier
(6) 2SB185 A.F amplifier
(7) 2SB185 A.F amplifier
(8) 2SB186 Driver
(9) 2SB22 Power amplifier
(10) 2SB22 Power amplifier

DIODES ..... 1S188×2 FM discriminator
1S188 FM A.G.C
1S188 FM Limiter
1S188 AM detector

POWER OUTPUT ..... 500 mW

SENSITIVITY ..... FM 5.0 μV
SW 100uV/m
BC 70uV/m

CURRENT DRAIN ..... No signal 19 mA
Maximum 130 mA

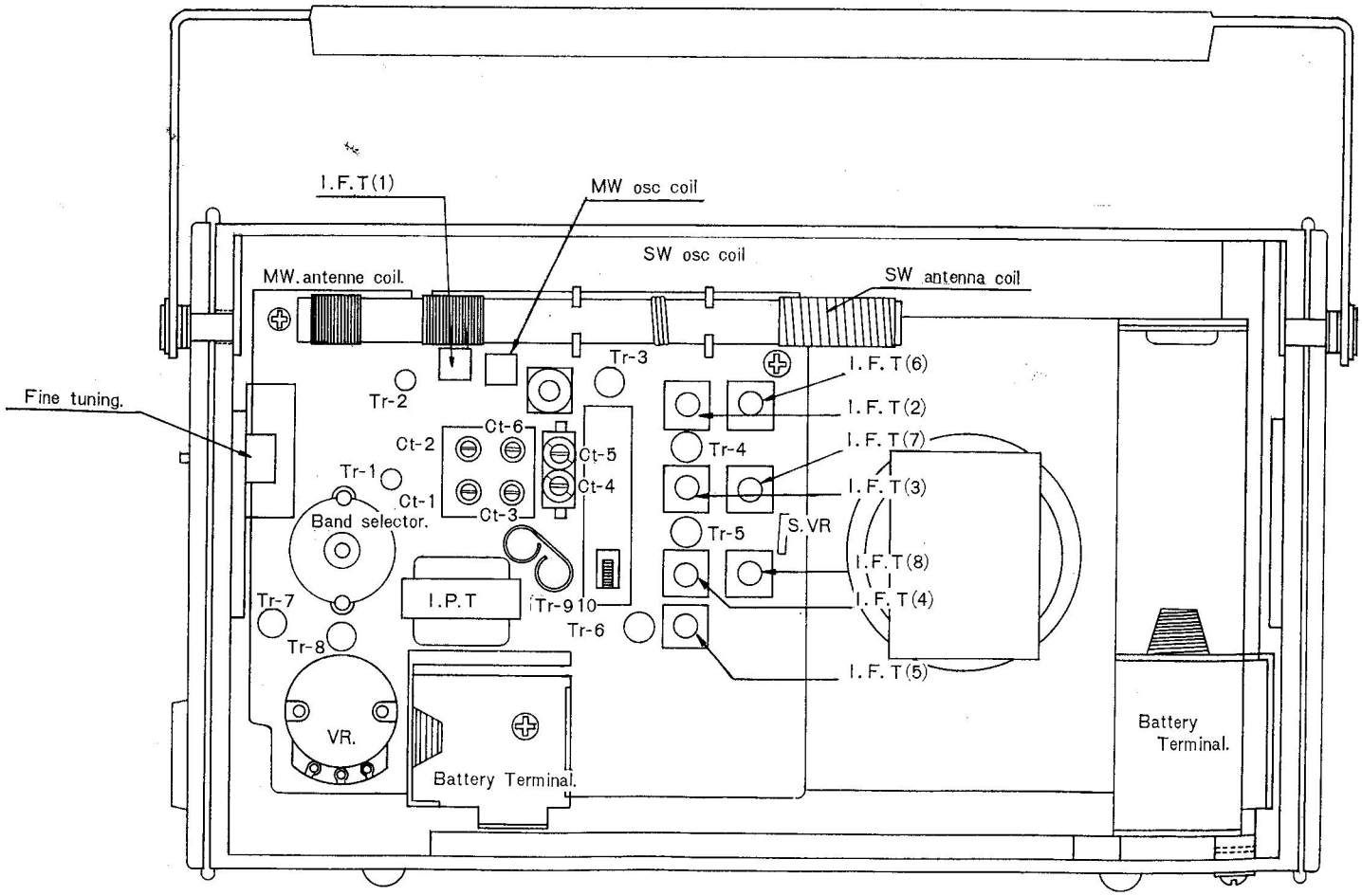
POWER SUPPLY ..... 6 volts, 4×UM-1 batteries (size "D" batteries)

LOUDSPEAKER ..... 100 mm Permanent Dynamic Speaker, voice-coil impedance 8 ohms

CABINET DIMENSSION ..... 250mm (W)×150mm (H) ×75mm (D)

NET WEIGHT ..... approx: 1.3kg

MAIN PARTS LOCATION



PARTS LIST

STOCK NO.	DESCRIPTION	Q'ty
	CABINET PROPORTION	
R-424297	Cabinet, complete	1
R-31680a	Panel, complete incl: R-24363 insert nut	1
R-261357	Speaker grille	1
R-471089	Battery instruction sheet	1
R-32582	Fixture	1
R-	Speaker net (Black Himelon 116×111)	1
R-241204	Cap nut	1
R-24545	Cap nut	1
R-26882	Badge	1
R-S81238	Handle, complete incl: R-112768 Handle R-39307 Cover	1
R-241206	Fixture (for handle)	2
R-24897	Special washer	2
R-	Washer (ethylene 9.5φ×6φ×0.2t)	4
R-261139	Special washer	2
R-	Washer (12φ×6φ×0.5t)	2
R-115146	Fixing metal	1
R-S7078	Special screw	4
R-	Plastic tape (19×80)	
R-	Moldplane (15×18×20)	1
R-	Protection paper (Ethylene sheet)	6
R-	Tape (12×50)	1
R-112486	Stopper	2
R-241203	Cap nut	2
R-	Tipe (3.3×8×3.6)	1
R-37044	Ribon (battery case)	1
R-	Felt (10×10×20)	1
R-31728	Dial	2
R-241203	Cap nut	1
R-291406	Decoration plate for knob base	3
R-S81241a	Knob, complete incl; R-39324a knob R-261356a decoration metal	1 1
R-S1237	Pointer complete incl; R-241205 pointer R-235054 slide	1
R-261207	Back plate	
R-S8790	Knob, complete incl: R-39092 knob R-26745 decoration metal	1
	CHASSIS PROPORTION	
R-112770	Rail	1
R-261359	Coil fixing metal	1
R-S81263	Shaft complete incl; R-241017 shaft R-245133 pedestal R-C type washer	1
R-S7069	Special nut	1
R-44065	Cushion	1
R-33226	Drum	1
R-245119	Pulley shaft	2
R-	Cushion (black rubber)	2
R-112769	Plate edge nut	1
R-241209	Shaft	1
R-39329a	Lever	1
R-S4345a	Special switch	1
R-112767	Fixing metal for FIN tuning	1
R-112682	Fixing metal for slide switch	1
R-41530a	Printed circuit board	1
R-	Dial rope (820mm)	1
R-24636	Pulley	2
R-15116	Coil sspring	1
R-13061	C type washer	1
	ELECTRICAL PARTS PROPORTION	
R-W2263b	Antenna coil complete (for M.W & S.W)	1
R-C1122	Variable capacitor (4F-20GWT)	1
R-W2222	Antenna coil for F.M	1
R-W9011	V.H.F coil (4½t) RF side	1
R-W9006	V.H.F coil (5½t) osc side	1
R-W9018	V.H.F coil (6½t) choke	1
R-W8181	Oscillator coil for M.W	1
R-W8202	Oscillator coil for S.W	1
R-W5T166	I.F.T (F.M)	1
R-W5T106	I.F.T (F.M)	1
R-W5T075	I.F.T (F.M)	1
R-W5T086	I.F.T (F.M)	1
R-W5T105	I.F.T (F.M)	1
R-W5T008	I.F.T (A.M)	1
R-W5T084	I.F.T (A.M)	1
R-W5T073	I.F.T (A.M)	1
R-R124141a	Variable resistor (10k w/switch)	1
R-S6368	Speaker	1
R-S6222a	Earphone, complete	1
R-R11011	Semi-fixed resistor	2
R-W6175	I.P.T	1
R-C1117	Variable capacitor (for Fine tuning)	1
R-C0050	Trimmer	2
R-W9016	V.H.F coil	1
R-S1269	Telescopic rod antenna	1
R-23676	Lug (for telescopic antenna)	1

STOCK NO.	DESCRIPTION	Q'ty
R-25239a	Spring (for V.C earth)	1
R-23730	Radiator (Fine)	1
R-S3018	Eyelet lug	1
R-S81240a	Battery terminal complete (−) incl: R-112765a battery terminal R-112766a battery terminal R-25080 coilspring R-23101 battery terminal R-34170 terminal R- eyelet 3×4 R- round rivet	1
R-S81239	Battery terminal incl; R-112771a battery terminal R-25080 coil spring	1
R-S2139	Earphone socket	1
R-S4361	Slide switch	1
R-S2155	Auto antenna socket	1
	TRANSISTORS	
Tr-1	2SA440	1
Tr-2	2SA440	1
Tr-3	2SA222	1
Tr-4	2SA321	1
Tr-5	2SA321	1
Tr-6	2SB185	1
Tr-7	2SB185	1
Tr-8	2SB186	1
Tr-9,10	2SB22 (pair transistor)	2
D-3,D-4	1S188 (pair diode)	2
D-1,D-2,D-5,D-6	1S188 or 1N60	4
	CAPACITORS	
R-C9143	200 μF 6 volts C-44,C-49,C-53	3
R-C9105	30 μF 6 volts C-46,C-48	2
R-C9078	5 μF 6 volts C-5,C-39,C-41,C-36,C-45	5
R-C9142	30 μF 3 volts C-23	1
R-C9157	200 μF 6 volts C-52	1
R-C9116	0.5 μF 10volts C-47	1
	RESISTORS	
R-45,46	2.2 ohm 5 % ¼ watt	2
R-42,44	62 ohm 5 % ¼ watt	2
R-1	220 ohm 5 % ¼ watt	1
R-41,43	1 k ohm 5 % ¼ watt	2
R-5,6	2.2k ohm 5 % ¼ watt	2
R-28	3.3k ohm 5 % ¼ watt	1
R-27	4.7k ohm 5 % ¼ watt	1
R-7	6.2k ohm 5 % ¼ watt	1
R-26	15k ohm 5 % ¼ watt	1
R-12	5.6k ohm 10% ¼ watt	1
R-25	39 ohm 10% ¼ watt	1
R-40	56 ohm 10% ¼ watt	1
R-36	68 ohm 10% ¼ watt	1
R-30,31,50	100 ohm 10% ¼ watt	3
R-11	150 ohm 10% ¼ watt	1
R-14	220 ohm 10% ¼ watt	1
R-15	270 ohm 10% ¼ watt	1
R-39	390 ohm 10% ¼ watt	1
R-16	560 ohm 10% ¼ watt	1
R-13	820 ohm 10% ¼ watt	1
R-10,17,18,19,35	1 k ohm 10% ¼ watt	5
R-2,9,23,34	2.2k ohm 10% ¼ watt	4
R-24,29	3.3k ohm 10% ¼ watt	2
R-38,48	3.9k ohm 10% ¼ watt	2
R-3	5.6k ohm 10% ¼ watt	1
R-20,33,37	10k ohm 10% ¼ watt	3
R-4,47	50k ohm 10% ¼ watt	2
R-21,22	220k ohm 10% ¼ watt	2
R-32	47k ohm 10% ¼ watt	1
R-49	1·8k 0hm 19% ¼ watt	1
	CAPACITORS	
C-8	2 pF 0.25 pF 50 wv	1
C-7	3 pF 0.25 pF 50	1
C-25,31,59	4 pF 0.25 pF 50	3
C-6	5 pF 0.25 pF 50	1
C-16,17,26,30	10 pF 10 % 50	4
C-28,34	12 pF 10 % 50	2
C-9,35	25 pF 10 % 50	2
C-1	30 pF 10 % 50	1
C-12	40 pF 10 % 50	1
C-3	70 pF 10 % 50	1
C-42,54	200 pF 20 % 50	2
C-10	500 pF 20 % 50	1
C-11	0.001 μF -80,-20 % 50	1
C-2.4	0.01 μF -80,-20 % 50	2
C-14,15,32,43 55, 60	0.02 μF -80,-20 % 50	6
C-33,56,62	0.04 μF -80,-20 % 50	3
C-13	0.005 μF -80,-20 % 50	1

6-20048 Printed in Japan

LIGNMENT PROCEDURES

AM ALIGNMENTS

SEQUENCE OF ALIGNMENT	WAVE RANGE	DIAL POINTER	SIGNAL FREQUENCY	GENERATOR MODULATION	CONNECTION HIGH SIDE OF SIGNAL GENERATOR TO;	DIAL POINTER	SIGNAL FREQUENCY	GENERATOR MODULATION	TRIMMER ADJUSTMENT	INDICATION
I.F.T T-8	BC	Min. Freq.	455 kc	AM 30 %	thru. Loop antenna					Max. output
I.F.T T-7	BC	Min. Freq.	455 kc	AM 30 %	thru. Loop antenna					Max. output
I.F.T T-6	BC	Min. Freq.	455 kc	AM 30 %	thru. Loop antenna					Max. output
Oscillator B.C	BC	600 kc	600 kc	AM 30 %	thru. Loop antenna	1400 kc	1400 kc	A.M 30%	Ct-6	Max. output
Ferrite antenna	BC	600 kc	600 kc	AM 30 %	thru. Loop antenna	1400 kc	1400 kc	A.M 30%	Ct-3	Max. output
Oscillator S.W	SW	3.5 mc	3.5 mc	AM 30 %	thru. Loop antenna	10.0 Mc	10.0 Mc	A.M 30%	Ct-5	Max. output
Ferrite Antenna	SW	3.5 mc	3.5 mc	AM 30 %	thru. Loop antenna	10.0 Mc	10.0 Mc	A.M 30%	Ct-4	Max. output

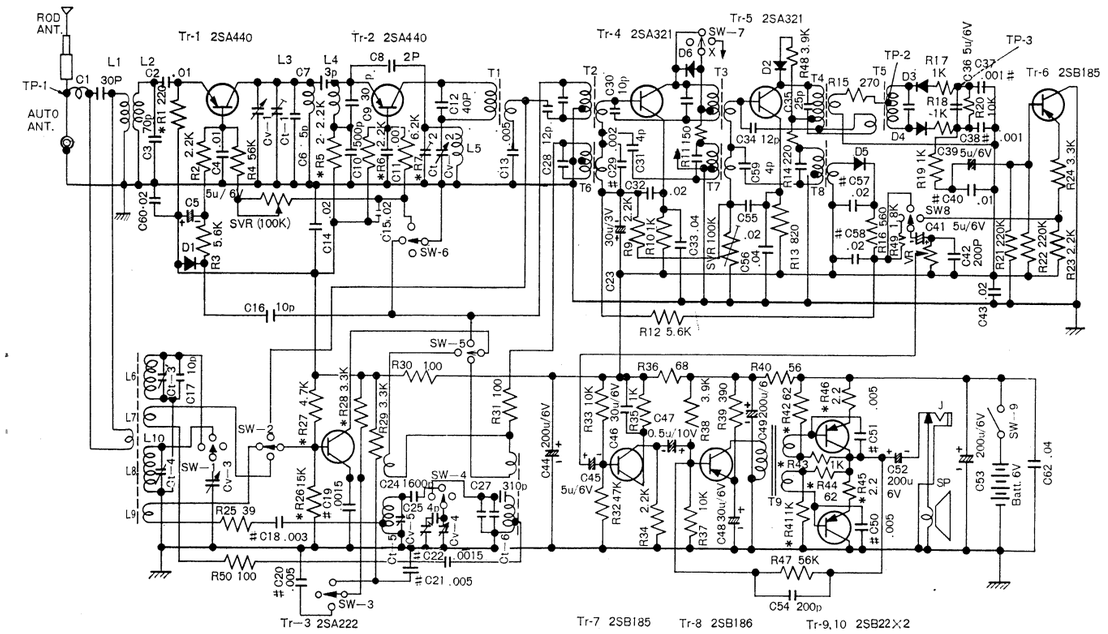
FM I.F ALIGNMENT

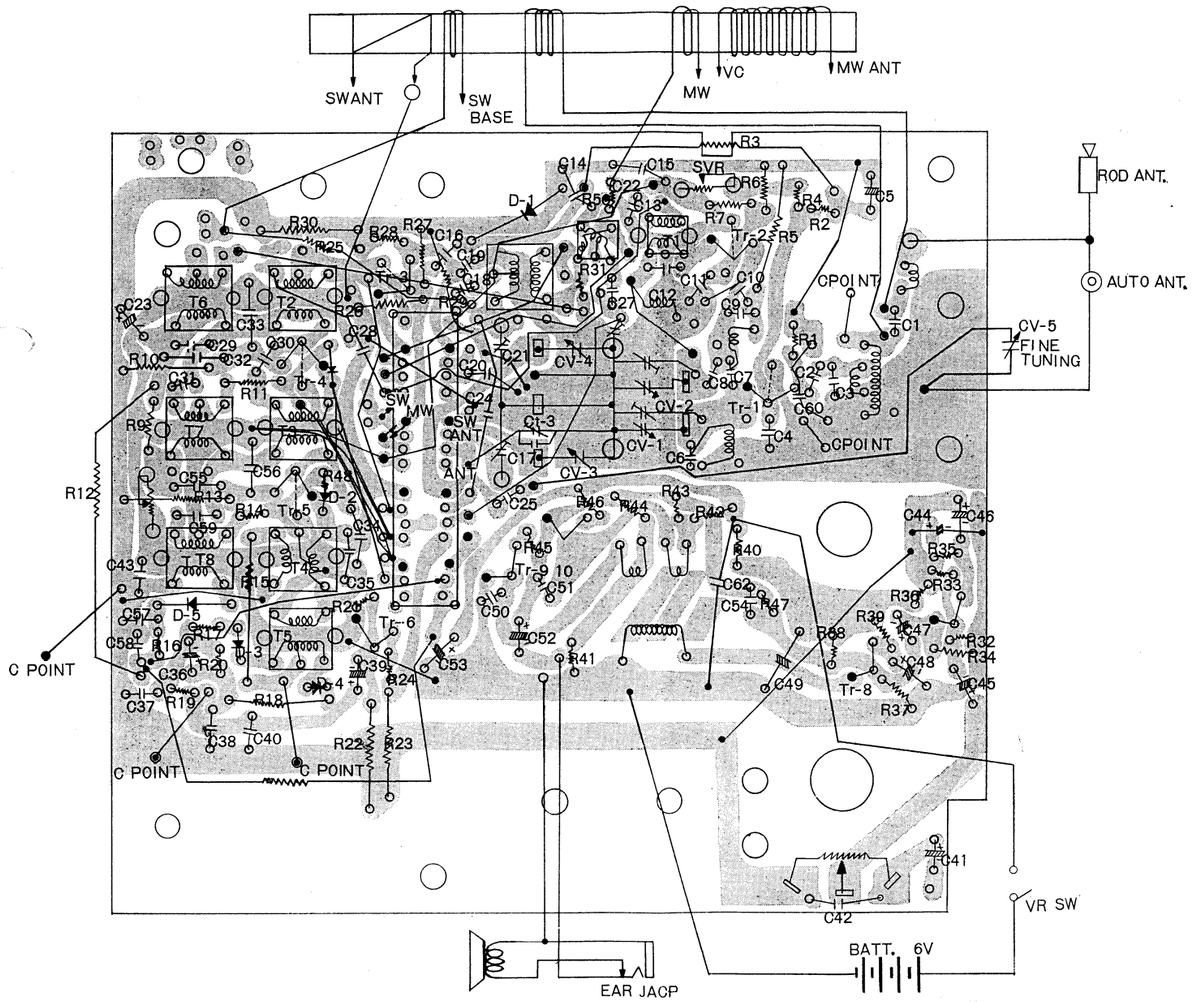
SEQUENCE OF ALIGNMENT	WAVE RANGE	ALIGNMENT FREQUENCY	TEST EQUIPMENTS CONNECTIONS	ADJUSTMENT	CURVE
I.F.T T-3	FM	10.7Mc	Connect Sweep Generator to test point TP-1 and Oscilloscope to test point TP-2	Detune T-5 and T-3 tune for max. gain and symmetry of response curve.	
I.F.T T-2	FM	10.7Mc	same as above connection	T-2 tune for max. gain and symmetry of response curve.	
I.F.T T-1	FM	10.7Mc	same as above connection	T-1 tune for max. gain and symmetry of response curve.	
I.F.T T-4	FM	10.7Mc	Connect Sweep Generator to test point TP-1 and Oscilloscope to test point TP-3	T-4,T-5 tune symmetry and max. gain of response curve.	

FM R.F ALIGNMENT

SEQUENCE OF ALIGNMENT	WAVE RANGE	DIAL POINTER	SIGNAL FREQUENCY	GENERATOR MODULATION	CONNECT HIGH SIDE OF GENERATOR TO ;	COIL ADJUSTMENT	DIAL POINTER	SIGNAL FREQUENCY	GENERATOR MODULATION	TRIMMER ADJUSTMENT	INDICATION
Oscillator	FM	87.0 Mc	87.0 Mc	F.M 22.5kc	Signal Genartor to TP-1	L-5	87.0 Mc	87.0 Mc	F.M 22.5kc	Ct-2	Max. output
Antenna	FM	87.0 Mc	87.0 Mc	F.M 22.5kc	Signal Generator to TP-1	L-3	87.0 Mc	87.0 Mc	F.M 22.5kc	Ct-1	Max. output

IRCUIT DIAGRAM





INTER PARTS WIRING